

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently amended) A method for producing a polyrotaxane comprising:

an inclusion step in which carboxylated polyethylene glycol having a carboxyl group at each end and cyclodextrin molecules are mixed together, to obtain a pseudopolyrotaxane in which the carboxylated polyethylene glycol is included in the cavities of cyclodextrin molecules in a skewered manner; and

a capping step in which capping groups each having a group that reacts with a carboxyl group are reacted with the pseudopolyrotaxane, to obtain a polyrotaxane having at each end a capping group,

wherein the carboxylated polyethylene glycol is prepared by oxidation of polyethylene glycol with 2,2,6,6-tetramethyl-1-piperidinyloxyradical (TEMPO); and

the oxidation with TEMPO is conducted in a weakly basic system which is a mixed solution of sodium bromide and sodium hypochlorite in water.

2. (Currently amended) A method for producing a polyrotaxane comprising:

an inclusion step in which carboxylated polyethylene glycol having a carboxyl group at each end and cyclodextrin molecules are mixed, to obtain pseudopolyrotaxane in which the carboxylated polyethylene glycol is included in the cavities of cyclodextrin molecules in a skewered manner; and

a capping step in which the pseudopolyrotaxane is reacted with capping groups each having a -NH₂ group or a -OH group, to obtain a polyrotaxane having at each end -CO-NH-(capping group) or -CO-O-(capping group),

wherein the carboxylated polyethylene glycol is prepared by the oxidation of polyethylene glycol with 2,2,6,6-tetramethyl-1-piperidinyloxy radical (TEMPO); and

the oxidation with TEMPO is conducted in a weakly basic system which is a mixed solution of sodium bromide and sodium hypochlorite in water.

3-8. (Canceled)